Title (en)
  LDMOS TRANSISTOR

Title (de)
  LDMOS-TRANSISTOR

Title (fr)
  TRANSISTOR MOS A DIFFUSION LATERALE (LDMOS)

Publication
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Application
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Abstract (en)
  [origin: WO2007007273A2] The LDMOS transistor (1) of the invention comprises a source region (3), a channel region (4), a drain extension region (7) and a gate electrode (10). The LDMOS transistor (1) further comprises a first gate oxide layer (8) and a second gate oxide layer (9), which is thicker than the first gate oxide layer (8). The first gate oxide layer (8) at least extends over a first portion of the channel region (4), which is adjacent to the source region (3). The second gate oxide layer (9) extends over a region where a local maximum (A, B) of the electric field (E) generates hot carriers thereby reducing the impact of the hot carriers and reducing the Idq-degradation. In another embodiment the second gate oxide layer (9) extends over a second portion of the channel region (4), which mutually connects the drain extension region (7) and the first portion of the channel region (4), thereby improving the linear efficiency of the LDMOS transistor (1).

IPC 8 full level
  H01L 29/78 (2006.01)

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  US 5918137 A 19990629 - NG SZE HIM [US], et al

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